

**Washington County Service Authority Board of Commissioners
January 28, 2019 Regular Meeting Minutes**

1. Call the Meeting to Order - *Chairman*

The Regular Meeting of the Washington County Service Authority Board of Commissioners, held in the E. W. Potts, Jr. Board Room located at 25122 Regal Drive, Abingdon, Virginia, was called to order by the Vice Chairman at 6:00 pm.

2. Roll Call – *Chairman*

Commissioners Present:

Mr. Dwain Miller, Chairman
Mr. Kenneth Taylor, Vice Chairman
Mr. Wayne Campbell
Mr. Jim McCall
Mr. Tim Orfield
Mr. Mike White

Commissioners Absent:

Mr. Vernon Smith

WCSA Officers Present:

Robbie Cornett; Secretary, General Manager
Melinda Jett; Treasurer, Controller
Carol Ann Shaffer; Assistant Secretary,
Administrative Assistant

General Counsel Present:

Thomas Dene, Esq.; Dene & Dene, P.C.

WCSA Staff Present:

Dave Cheek PE; Operations Manager
Holly Edwards; Customer Service
Bobby Gobble; Assistant Maintenance
Manager
Ryan Kiser, PE; Engineering Manager
Johnny Lester; Maintenance Manager
Tommy Orfield; WWTP Operator
Ken Perrigan; Meter Manager
Leroy Sullivan; WWTP Operator

**3. Prayer and Pledge of Allegiance –
*Dwain Miller***

Mr. Miller opened the meeting in prayer and led the Pledge of Allegiance.

**4. Approval of the Amended Agenda –
*Chairman***

Mr. Taylor motioned to approve the Amended Agenda presented by Mr. Cornett. Mr. Campbell seconded and the Board approved voting 6-0.

**5. Public Query and Comment –
*Chairman***

There was no public query or comment.

**6. Approval of the Consent Agenda with
Exceptions - *Chairman***

A. Approval of Minutes:

- December 17, 2018 Regular Meeting Minutes

B. Routine Reports: December 2018

- Water Production
- Water Distribution
- Meter Department
- Wastewater Operations
- Customer Service
- Maintenance
- Engineering
- Accounting
- Health & Safety Report

C. Financial Reports: December 2018

- Balance Sheet (Not Included)
- Income Statement (Not Included)
- Check Register / General Manager Financial Report; Excluding Check # 042165 to Mountain Materials

Mr. Campbell motioned to approve the Consent Agenda. Mr. White seconded and the motion carried with a vote of 6-0-0-1.

**7. Consideration of Check # 042165 to
Mountain Materials for \$313.37 -
*Chairman***

Mr. Taylor abstained from discussion so voting on check number 042165 as due to his affiliation with Mountain Materials.

Mr. McCall motioned to approve the check, Mr. Orfield seconded. The motion carried with a 6-0 vote.

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**8. Legal Counsel Report and Update –
*Thomas Dene***

Mr. Dene reminded the Commissioners the Financial Disclosure Agreements were due to Ms. Phillips by February 1, 2019.

9. Administration Report – *Robbie Cornett*

An outline of the Mr. Cornett's presentation is attached.

10. Water and Wastewater Construction Projects Update – *Ryan Kiser*

Mr. Kiser discussed the attached presentation.

11. Operations Manager's Report and Update – *Dave Cheek, Tommy Orfield and Leroy Sullivan*

An outline of the report presented by Mr. Cheek is attached.

The presentation discussed by Mr. Orfield and Mr. Sullivan is also attached.

12 Consideration of Task Order 1 to the General Engineering Services Agreement Between WCSA and Bennett Associates for the Screening System Upgrade at the Hall Creek Waste Water Treatment Plant - *Dave Cheek, Ryan Kiser*

Mr. Kiser discussed the attached presentation for Agenda Item 12.

Mr. Taylor motioned to accept Task Order 1 as recommended. Mr. White seconded and the motion carried with a unanimous Board vote.

13. Consideration of Rich Valley Road Water system Project Bids and Funding - *Ryan Kiser*

Mr. Kiser's presentation regarding Agenda Item 13 is attached.

Mr. McCall abstained from discussions or voting on this Agenda Item as his employer; King Construction; bid on the job.

A motion to award Contract 1 to Little B Enterprises for \$2,040,213.85 was made by Mr. Taylor; seconded by Mr. Campbell and approved by 5-0-1-1 Board vote.

Mr. Campbell then made a motion to award Contract 2 for \$1,349,625 to McFall Excavating and WCSA funding the remaining shortfall totaling \$227,262.58. Mr. White seconded the motion and it carried with a 5-0-1-1 vote.

Mr. White motioned to adopt the Resolution Providing Additional Funding for the Rich Valley Road Water Line Extension Project. Mr. Taylor seconded and the motion passed with a vote of 5-0-1-1.

14. Consideration of Task Order No. 1 between Washington County Service Authority and WRA for the Mill Creek Drinking Water Plant Environmental Health and Safety Evaluation - *Dave Cheek*

Mr. Taylor motioned to approve the Task Order as presented. Mr. Campbell gave a second to the motion. The Board unanimously approved voting 6-0.

15. Closed Meeting –8:16 pm

Mr. Campbell moved that Board of Commissioners of the WCSA adjourn to Closed Meeting in accordance with the Virginia Freedom of Information Act,

1. **Code of Virginia Section 2.2-3711 Paragraph (A) (7): Actual Litigation:** Consultation with legal counsel and briefings by staff members pertaining to actual litigation, where such consultation or briefing in open meeting would adversely affect the negotiating or litigating posture of the WCSA, specifically involving the case of Washington County Service Authority v. Bundy, currently pending in the Circuit Court of Washington County, Virginia.
2. **Code of Virginia Section 2.2-3711 Paragraph (A) (1):**

Washington County Service Authority Board of Commissioners
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Discussion and consideration of the performance of specific employees of WCSA, and the resignation of a specific employee of WCSA.

In addition to the Board the presence of General Manager Robbie Cornett, Operations Manager Dave Cheek and General Counsel Thomas Dene were requested.

Mr. White seconded and the Board approved voting 6-0-0-1.

16. Motion to Open Meeting – 9:02 pm

Mr. Taylor moved the Board return to Open Session. Mr. McCall seconded and the Board approved voting 6-0-0-1.

Mr. Campbell read the following Certification of Closed Meeting:

Whereas, the Board of Commissioners of the Washington County Service Authority has convened a Closed Meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act;

And Whereas, Section 2.2-3712 Paragraph D of the Code of Virginia requires a certification by this Authority that such Closed Meeting was conducted in conformity with Virginia law;

And Now, therefore, be it resolved that the Board of Commissioners of the Washington County Service Authority hereby certifies that to the best of each member's knowledge, (1) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the Closed Meeting to which this certification resolution applies, and (2) only such public business matters as were identified in the motion convening the Closed Meeting were heard, discussed or considered by the Board.


Aye by Mr. Campbell, Mr. Taylor, Mr. Miller, Mr. McCall, Mr. Orfield and Mr. Smith confirming no outside discussion took place other than Closed Meeting topics.

17. Late Items – Chairman


"I have one. It's a comment strictly from me about Mark Osborne. Not only during presentations here, I had the pleasure; out here in the ditches, working on some projects with the company I work for. Never once did I ask a question and didn't get an answer and got it quick. He was a gentleman and I wish him well and I still think he was a great asset to this Authority." Mr. McCall asked that his comment be placed in public record.

18. Adjourn – 8:14 pm

Mr. Taylor made a motion to adjourn, Mr. White seconded and the Board approved voting 6-0-0-1.



Mr. Dwain Miller, Chairman



Carol Ann Shaffer, Assistant Secretary

1  **Administration Report**

January 28, 2019
Robbie Cornett

2  **Institutional Knowledge & Procedure**

- Not documented in bylaws or other document (passed down)
- Board Member agenda items
 - Board Member contacts the Chairman or General Manager
 - Board Member/Chairman and General Manager consider the appropriate place on the agenda
 - Open Meeting
 - Public query and comment
 - Specific agenda item
 - Late Item
 - Closed Meeting

3  **Institutional Knowledge & Procedure**

- Not documented in bylaws or other document (passed down)
- Late Items
 - Opportunity for
 - Any item not on the agenda but needs attention before next meeting (Commissioner or General Manager)
 - Post Closed Meeting business that needs attention before the next meeting (Commissioner or General Manager)
 - Commissioner reports or questions or requests
 - Opportunity for a Commissioner to share thoughts, questions or concerns and for the Board to Operate as a "unit" (i.e. a Board) while doing so

4  **Institutional Knowledge & Procedure**

- Proposed: Standing Agenda Adjustment
- "Commissioner Thoughts, Questions or Concerns" as an agenda item
 - Chairman goes around the dais calling on Board Members to share any thoughts, questions or concerns they may have.
 - While it may be clear when some thoughts, questions or concerns are to be raised during the meeting, some may not be therefore this provides that opportunity.
 - Opportunity to promote an increased awareness of the governments business; especially if it is something that may lead to the exercise of resources or expenses or an eventual vote by the Board.
 - Remember: Some things are exempt from disclosure therefore we would want to save those items for a Closed Meeting.

5  **Veterans Memorial Park Foundation**

- Helped them with a meter in the normal course
 - Previously, the Town had a meter on the property before and it was agreed that it would transfer

6  **USDA Rural Development Requirement**

- Technical, Managerial and Financial Capacity – It is required that members of the Board of Directors, Council members, trustees, commissioners, and other governing members possess the necessary technical, managerial, and financial capacity skills to consistently comply with pertinent Federal and State laws and requirements. It is recommended members receive training within one year of appointment or election to the governing board, as well as a refresher training for all governing members on a routine basis. The content and amount of

training should be tailored to the particular needs of the particular individual and the utility system. Technical assistance providers are available to provide this training for your organization, often at no cost. You may contact Rural Development for information.

7 **USDA Rural Development Requirement**

- Why?
 - Don't know. Maybe cases such as Flint, Michigan (health costs est. @ \$458M); Pacific, Gas & Electric (48 lives/\$6.8B losses/2d time); Castlewood Water and Sewer Authority; BVUA and the like. Likely for financial reasons.
- Trend
 - Two bills (SB 1430 & SB 1431) in Virginia General Assembly right now which, if passed, would require elected Boards to receive Conflicts of Interest and Public Procurement Training
 - 2018 – Tennessee General Assembly passes legislation requiring municipal and utility board members be trained by March 1, 2019. 12 hours of training within 12 months of election or appointment is required. Continuing education is also required.

8 **USDA Rural Development Requirement**

- Proposal
 - Explore options with focus on quality and content
 - Who is the trainer(s) and are they a good fit
 - Does what they teach:
 - Meet or exceed RDs minimum requirements
 - Align with WCSA values (strategic planning)
 - Meet expectations
 - What does this board do (craft the training accordingly)

9 **Projects**

- Lee Highway Corridor
 - 100% Preliminary Engineering Report
- Water Withdrawal Permit
 - DRAFT Permit
- Strategic Planning
 - Foundations Workshop February 4, 2019
- Rate, Fees and Charges
 - DRAFT Model Review February 4, 2019
- FYE 2018 Audit
 - Board Presentation February 25, 2019
- Administrative Building
 - Lobby Improvements
 - Security and Surveillance
- Great Plains Software Upgrade
 - December 2019

10 **Projects Continued**

- Aggregate Transfer
 - February 2019
- Health Insurance Consultant
 - Spring 2019 Procurement
- Health Insurance Benefits
 - Summer 2019
- Banking Services

• Fall 2019

11  **Health Insurance Over The Years**

12  **Looking Ahead**

- Lee Highway Corridor
- Water Withdrawal Permit
- Strategic Planning
- Rate, Fees and Charges
- FYE 2018 Audit
- Administrative Building
- Business Process Review
- Health Consultant / Benefits
- Banking Services



Water Line Extension Projects


- Rattle Creek - Advertised – January 20th
 Pre-bid – February 7th
 Bid Opening- February 21st.
- Rich Valley Road - Received bids – December 18th

 Staff will be presenting recommendation as part of Agenda
 Item 13.
- Sugar Cove Road - Staff is finalizing plans to submit to
 VDH and is working with a pump representative on some
 design alternatives.



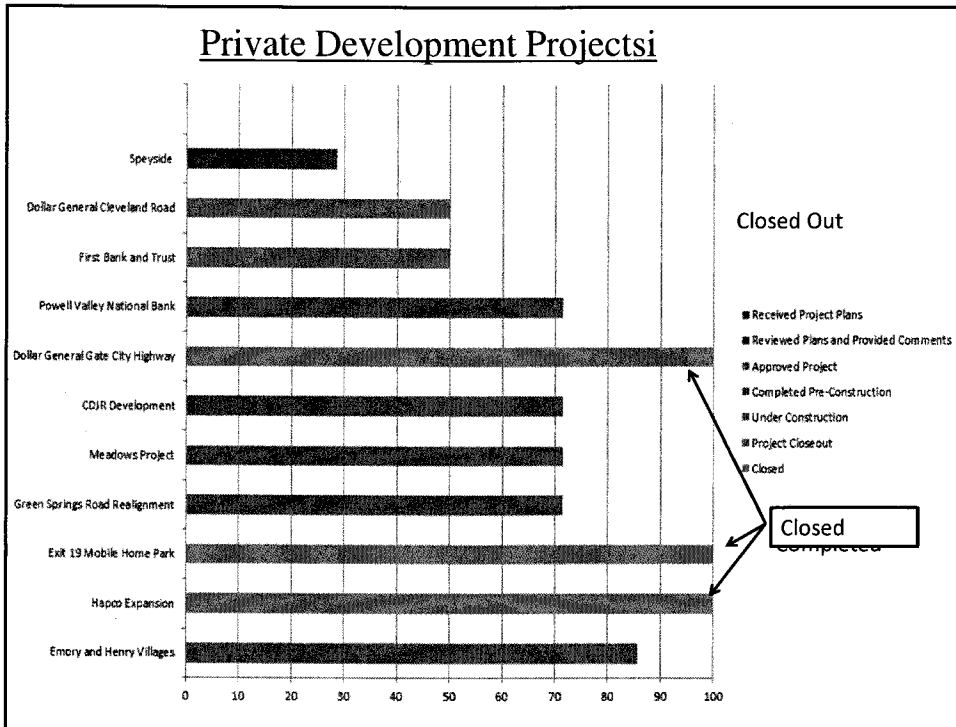
Water Line Extension Projects








- Hidden Valley Phase 2 –
- Staff is renewing purchase option agreement with landowner of proposed wellsite.
- Once the purchase option agreement is extended, WCSA will sign Contract with Barton Well Drilling
- Environmental permits and have been submitted to agencies.
- Staff has begun acquiring easements for the project. Obtained @ 35% of mainline and LMI easements.










Water Line Extension Projects

- Mendota and Archery Range Road/Mary's Chapel Road – Hurt and Proffitt have the PER ready to submit to Rural Development.




- 1  **December 2018 Operational Update**
January 28, 2019
- 2  **Discussion Items**
 - ▶ People
 - ▶ Safety
 - ▶ Department Highlights
 - ▶ Forward Looking Statement
- 3  **Safety**
 - ▶ Working with VML (Eddie Shelton)
 - OSHA
 - OSHA at a Glance Training at WCSA, Dec 20, 2018 (Try for Most Employees)
 - Advanced OSHA Certification Training in early 2019 for Supervisory Emp.
 - Working with Hands on Confined Space and Trench Safety Training in 2019
- 4  **2018 December Water Production Highlights**
 - ▶ Mill Creek
 - Mill Creek Plant Replacement
 - Built to Approved Plans and Specifications (Currently Less than 10 Change Orders)
 - Partial Substantial Completion Certificate Received by Owner from Engineer
 - Owner Requested Testing Verification from Engineer to Support Partial Completion Certificate
 - On Time (Currently Our Records show 241 days after Revised Completion Date (June 1, 2018))
 - Owner has been generous with additional days
 - Owner Liability in Additional Project Administration and RPR Costs
 - TOC has Additional Water Costs
 - WCSA in lost revenue
 - On Budget
 - Currently Our Records show us to be about \$500,000 under budget for Project
- 5  **2018 December Wastewater Process Highlights**
- 6  **Forced Air Dried Sludge**
Presented By:
Tommy Orfield
&
Leroy Sullivan
- 7  **2018 December Wastewater Headworks Process (Task Order)**
 - ▶ 1) Engineer Reviews the Process
 - ▶ 2) Engineer Brainstorms with WCSA Operators on Critical to Quality (CTQ) Items
 - ▶ 3) Engineer reviews with WCSA
 - ▶ 4) Engineer Prepares Bid Documents
 - ▶ 5) WCSA Bids
 - ▶ 6) WCSA Provides Project Management & Inspection
 - ▶ 7) Engineer Provides QA/QC Documents

- ▶ 8) Engineer Audits WCSA for QA/QC Compliance
- 8  **2018 December Distribution Highlights**
 - ▶ Providing Technical Support to SFI (Pump Replacement) and MFDWP Issues
 - ▶ Cross Connection/Back Flow
- 9  **2018 December Distribution Highlights**
- 10  **2018 December Distribution Highlights**
- 11  **2018 December Distribution Highlights**
 - ▶ WCSA is in the Process of Identifying all of our Customers who meet the above Criteria.
 - Then Quantify their hazard potential and work with them to comply with our approved plan
 - Once we have a good understanding we will advise the Board of Commissioners of our Progress and Completion Dates
- 12  **2018 December Metering Highlights**
 - ▶ Meter Replacement, Very Large Project
 - ▶ Signed Contract with UMS – 2 Task Orders
 - 1.1 Current Business Process and Technology Assessment \$53,450
 - 2.1 AMI Solution Design \$120,900
 - ▶ Kick Off Meetings held in January
- 13  **2018 December Water Maintenance Highlights**
 - ▶ Department Management
 - Really utilizing Planner to Maintain Assets
 - Engaging Crew Chiefs in Coverage
 - ▶ Routine Activities
 - Leaks – 30 (2015 Avg. 30)
 - Main Line Breaks – 3 (2015 Avg. 6)
 - After Hours Responses – 45 (2015 Avg. 38) (See Overtime)
 - *After Hours Responses a Target Area for Improvement*
 - ▶ Costs
 - Preventive Maintenance
 - Mobile Equipment
 - Tanks
 - Pump Stations
 - Fire Hydrants
- 14  **2018 October Water Maintenance Planner Activities**

The WCSA Board of Commissioners approved WCSA converting a position to planner. WCSA advertised both internally and externally for this position. An internal candidate, Randall Mitchell was offered and accepted the position.

Randall is heavily involved with taking more complex jobs and breaking them down into manageable pieces, obtaining approvals, procuring materials and helping the team complete the task.

Randall is focused on WCSA maintaining our assets with minimal costs.
- 15  **2018 October Water Maintenance**

Planner Activities

16  **2018 October Water Maintenance
Planner Activities**

17  **2018 October Water Maintenance
Planner Activities**

18  **Monthly We are Tracking Under Budget**

19  **Year to Date we are Tracking Under Budget**

20  **Forward Looking Statement**

▶ **Customer Relationships**

- Fire Departments
 - Hydrants & Training – Well in Progress
- Water & Sewer Customers
 - More Customer Engagement at Time of Contact
 - Door Hangers

▶ **Quality**

- System Pressure/Flow Variations as Detected During Hydrant Stress Tests

▶ **Costs**

- Production Costs (Water Loss and I&I)
- Continue to work with all Departments to reduce Non Revenue Activities (NRA)
- Hydrants as a Device to "Stress Test" our Water Delivery System to identify Problems Early
- Construct Hydraulic Grade lines in our GIS to aid in Troubleshooting and Early Detection
- Work with Engineering/Operations on How to Work Together to Obtain the Most Value in our Construction Projects

Forced Air Dried Sludge

Presented By:
Tommy Orfield
&
Leroy Sullivan

Problem

- The Biggest headache for wastewater treatment plants everywhere is getting rid of the Sludge or Biosolids (the other finished product).

What's the Problem?

- Unlike the water we treat, which is reintroduced to the river or creek, Biosolids "Pile Up Quick" and there are few options to get them off site. None of which are cheap.
- In essence we make a product that we have to pay to get rid of.

The Problem Cont.

- The Dewatering of Sludge is a treatment step almost everywhere you go. Here is a summary of the Process.
 - Sludge is pumped out of the process to separate tanks called Digesters.
 - After digestion we are ready to dewater.
 - Dewatering starts with the addition of a coagulant, this causes the solids to clump together releasing water as a result.

The Problem Cont.

- The Sludge is now ready to be run on a Press (like at Hall Creek) or pumped to a Drying Bed (Damascus).
- The end result is now what we call Biosolids (this is the product we have to pay to get rid of)
- What makes this such an expense is the amount of water still in our Biosolids (cake) we measure this one of two ways. % Cake or % Moisture
- Percent cake is normally how we report what we send to the landfill which charges us by the ton.

Definitions

- Percent Cake – The actual amount of solids we are getting rid of when we haul.
- Percent Moisture – The amount of water still left in the Biosolids we haul.

These Two go hand in hand, if you know one you can get the other simply by subtracting from 100 because...

$$\text{Percent Cake} + \text{Percent Moisture} = 100\%$$

- Example: 20% cake contains 80% moisture.

The Goal

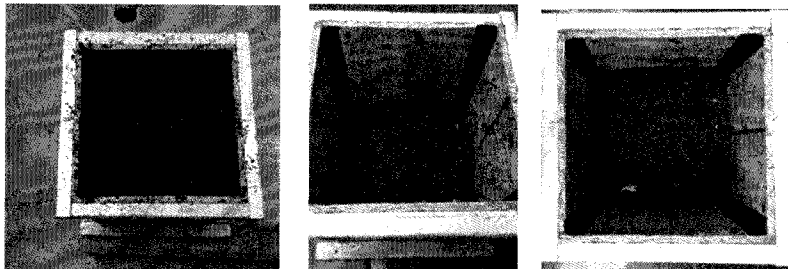
- Our goal then is to get rid of Biosolids at as high of a rate as possible without breaking the bank.
- The idea, and reason we are here is to discuss the option to add forced air to our Biosolids cake to try and reduce the Moisture content (increase percent cake) so that when we haul we will be getting rid of more solids and less water.
- Here are some real numbers and test results...

Disposal Cost

- Damascus Haul to landfill
 - Cost for 10.16 Tons @ \$42.70 per ton = \$433.83
 - Pickup & Admin Fees and Rental = \$273.58
 - Total = \$707.41
- So here is what we did...

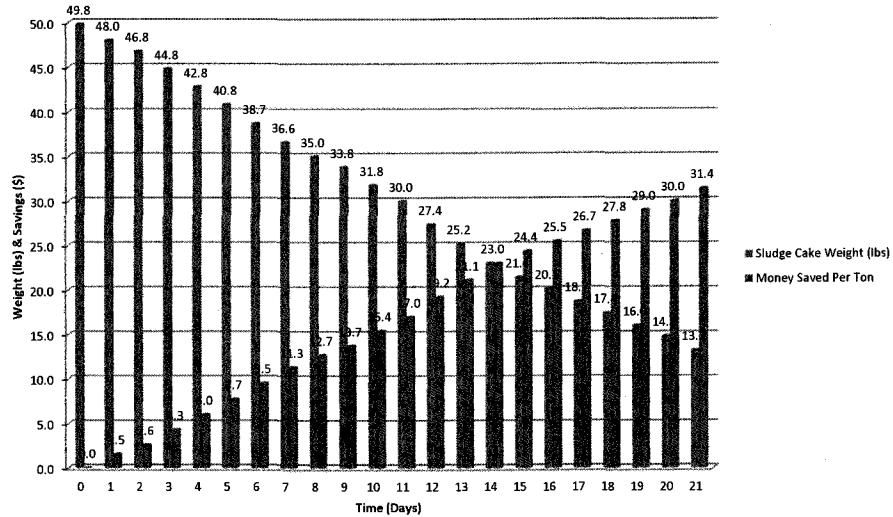
What we did

- We took a sample of biosolids and placed in a Ft³ box, ran a air line to the box and used a Bathroom scale to measure every morning for three weeks.
- After three weeks we saw a BIG difference.

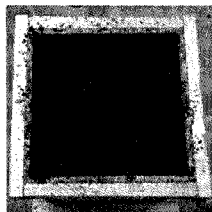


Results

Sludge Weight & Money Saved Per Ton VS Time



Percent Cake



Starting Cake 16.7%
 Meaning we had
 83.3% Moisture.
 Weight 49.8 lbs



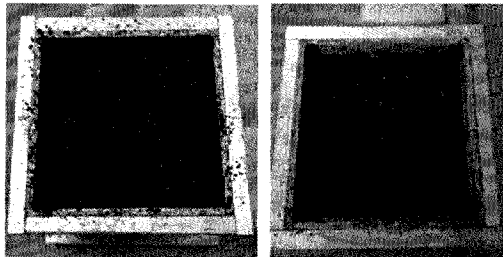
Ending Cake 37.5%
 meaning we had
 reduced 20.8%
 moisture leaving 62.5%
 Moisture.
 Weight 13.2 lbs



No Air Results

- We ran this test in a controlled environment so we thought it would be a good idea to run another test in the same condition just without the air for another three weeks.
- The results were as expected.

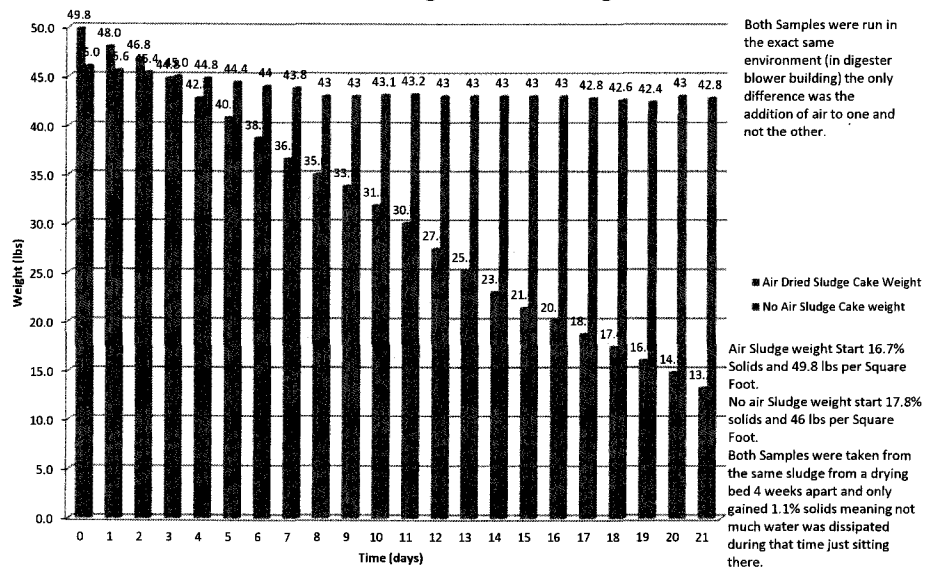
Starting Cake
17.8%
Weight 46.0 lbs



Ending Cake
19.4%. Only
reducing the
Moisture content
by 1.6%
Weight 42.8 lbs

Results for Air VS No Air

Air Dried Weight VS No Air Weight



Data for Biosolids with Air

Drying Sludge Cake with Blower Trial

Location: Hall Creek Starting % cake: **16.70%** Start Date: 12/6/2018
 Box Weight (lbs) 16.2 Ending % cake: **37.50%** End Date: 12/20/2018
 Box + Sludge Cake (lbs) 66.0

Sample #	Total Weight (lbs)	Sludge Cake Weight (lbs)	Time (hours)	Days	% Reduction (lbs)	Water dissipated (lbs)	Cubic Feet per 1 Ton	Price per Cubic Foot	Money Saved Per Ton	Calculated % Cake
1	66.0	49.8	0	0	0	0.0	40.2	1.06	0.0	16.7
2	65.6	49.4	4		0.8	0.4	40.5	1.05	0.3	16.9
3	64.6	48.4	17		2.8	1.4	41.3	1.03	1.2	17.4
4	64.4	48.2	21		3.2	1.6	41.5	1.03	1.4	17.5
5	64.2	48.0	24	1	3.8	1.8	41.7	1.02	1.5	17.6
*Average	63.0	46.8	48	2	6.0	3.0	42.7	1.00	2.6	18.2
*Average	61.0	44.8	72	3	10.0	5.0	44.6	0.96	4.3	19.2
6	59.2	43.0	94		13.7	6.8	46.5	0.92	5.8	20.2
7	59.0	42.8	96	4	14.1	7.0	46.7	0.91	6.0	20.3
8	58.6	42.4	101		14.9	7.4	47.2	0.91	6.2	20.5
9	57.0	40.8	117	5	18.1	9.0	49.0	0.87	7.7	21.2
10	54.9	38.7	145	6	22.3	11.1	51.7	0.83	9.5	22.2
11	52.8	36.6	171	7	26.5	13.2	54.6	0.78	11.3	23.4
12	51.2	35.0	193	8	29.7	14.8	57.1	0.75	12.7	24.2
*Average	50.0	33.8	217	9	32.1	16.0	59.2	0.72	13.7	24.8
*Average	48.0	31.8	241	10	36.1	18.0	62.9	0.68	15.4	25.8
13	46.2	30.0	264	11	39.8	19.8	66.7	0.64	17.0	26.8
14	43.6	27.4	288	12	45.0	22.4	73.0	0.58	19.2	28.1
15	41.4	25.2	312	13	49.4	24.6	79.4	0.54	21.1	29.2
16	39.2	23.0	336	14	53.8	26.8	87.0	0.49	23.0	30.3
17	37.6	21.4	350	15	57.0	28.4	93.5	0.46	24.4	31.1
*Average	36.3	20.1	374	16	59.6	29.7	99.5	0.43	25.5	31.8
*Average	34.9	18.7	398	17	62.4	31.1	107.0	0.40	26.7	32.5
*Average	33.6	17.4	422	18	65.1	32.4	114.9	0.37	27.8	33.2
18	32.2	16.0	446	19	67.9	33.8	125.0	0.34	29.0	33.9
19	31.0	14.8	470	20	70.3	35.0	135.1	0.32	30.0	34.5
20	29.4	13.2	494	21	73.5	36.6	151.5	0.28	31.4	35.3

Data for Biosolids without Air

No Air (Standard) Data Set 2

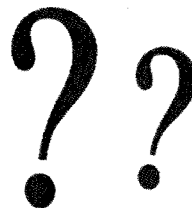
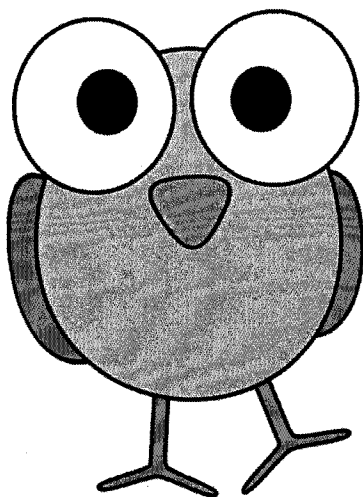
Location: Hall Creek Starting % cake: **17.80%** Start Date: 1/3/2019
 Box Weight (lbs) 17.0 Ending % cake: **19.40%** End Date: 1/24/2019
 Box + Sludge Cake (lbs) 63.0

Sample #	Total Weight (lbs)	Sludge Cake Weight (lbs)	Days	% Reduction (lbs)	Water dissipated (lbs)	Cubic Feet per 1 Ton	Price per Cubic Foot	Money Saved Per Ton	Calculated % Cake
1	63.0	46.0	0	0.0	0.0	43.5	0.98	0.00	17.8
2	62.6	45.6	1	0.9	0.4	43.9	0.97	0.37	18.0
*Average	62.4	45.4	2	1.3	0.6	44.1	0.97	0.56	18.2
*Average	62.0	45.0	3	2.2	1.0	44.4	0.96	0.93	18.4
3	61.8	44.8	4	2.6	1.2	44.6	0.96	1.11	18.5
4	61.4	44.4	5	3.5	1.6	45.0	0.95	1.49	18.8
5	61.0	44	6	4.3	2.0	45.5	0.94	1.86	19.0
6	60.8	43.8	7	4.8	2.2	45.7	0.94	2.04	19.2
7	60.0	43	8	6.5	3.0	46.5	0.92	2.78	19.6
*Average	60.0	43	9	6.5	3.0	46.5	0.92	2.78	19.6
*Average	60.1	43.1	10	6.3	2.9	46.4	0.92	2.69	19.6
8	60.2	43.2	11	6.1	2.8	46.3	0.92	2.60	19.5
9	60.0	43	12	6.5	3.0	46.5	0.92	2.78	19.6
10	60.0	43	13	6.5	3.0	46.5	0.92	2.78	19.6
11	60.0	43	14	6.5	3.0	46.5	0.92	2.78	19.6
12	60.0	43	15	6.5	3.0	46.5	0.92	2.78	19.6
*Average	60.0	43	16	6.5	3.0	46.5	0.92	2.78	19.6
*Average	59.8	42.8	17	7.0	3.2	46.7	0.91	2.97	19.8
*Average	59.6	42.6	18	7.4	3.4	46.9	0.91	3.16	19.9
14	59.4	42.4	19	7.8	3.6	47.2	0.91	3.34	20.0
15	60.0	43	20	6.5	3.0	46.5	0.92	2.78	19.6
16	59.8	42.8	21	7.0	3.2	46.7	0.91	2.97	19.8

Our Plan

- At Damascus, in addition to the air we vent (waste), we plan to add a blower to introduce (force) air beneath the Biosolids, reducing the percent moisture content, which would decrease the number of hauling trips, reducing the cost of disposal.
- We are shooting for efficiency! A full scale model can easily be installed by WCSA at a low cost.

Questions?



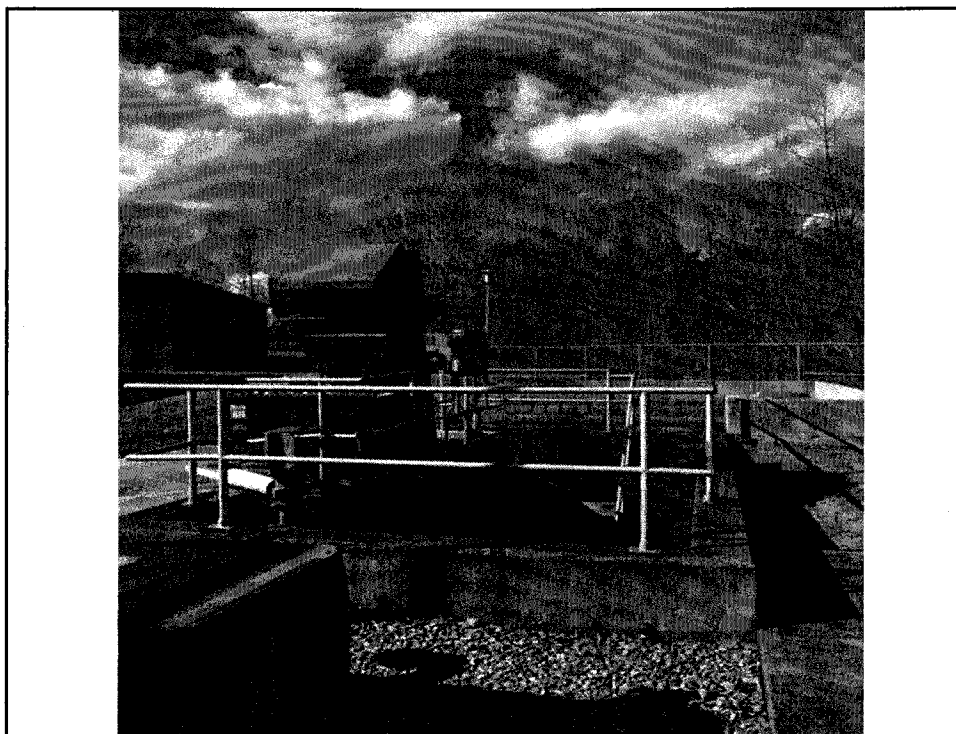


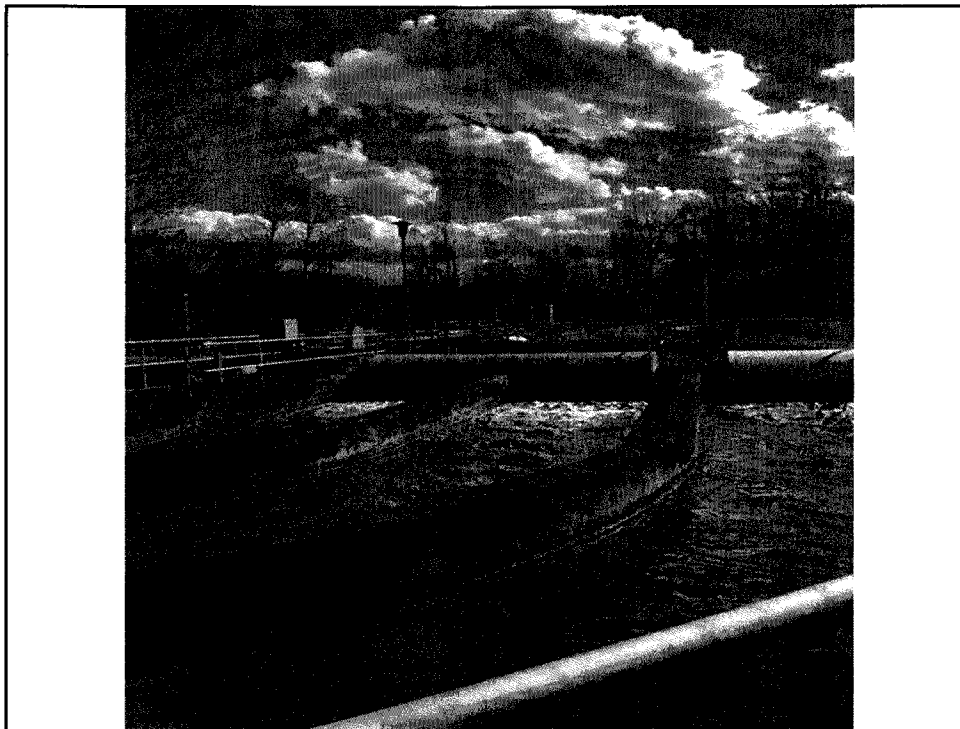
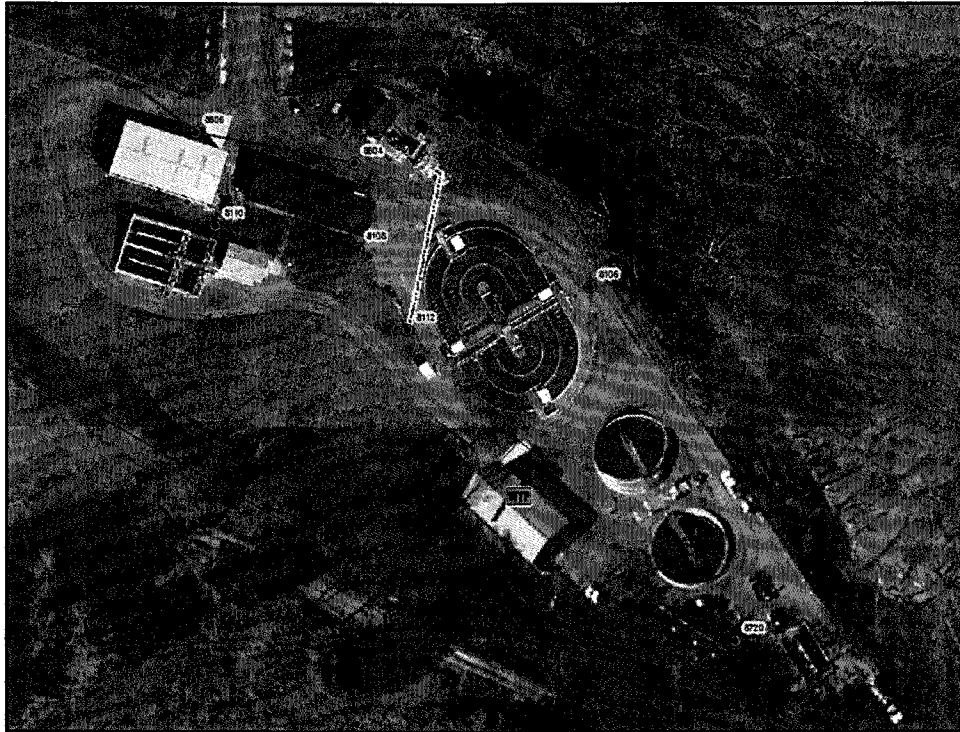
Agenda Item 12 – Consideration of Task Order 1 Between Bennett Associates and WCSA for Screening System Upgrade to the Hall Creek WWTP

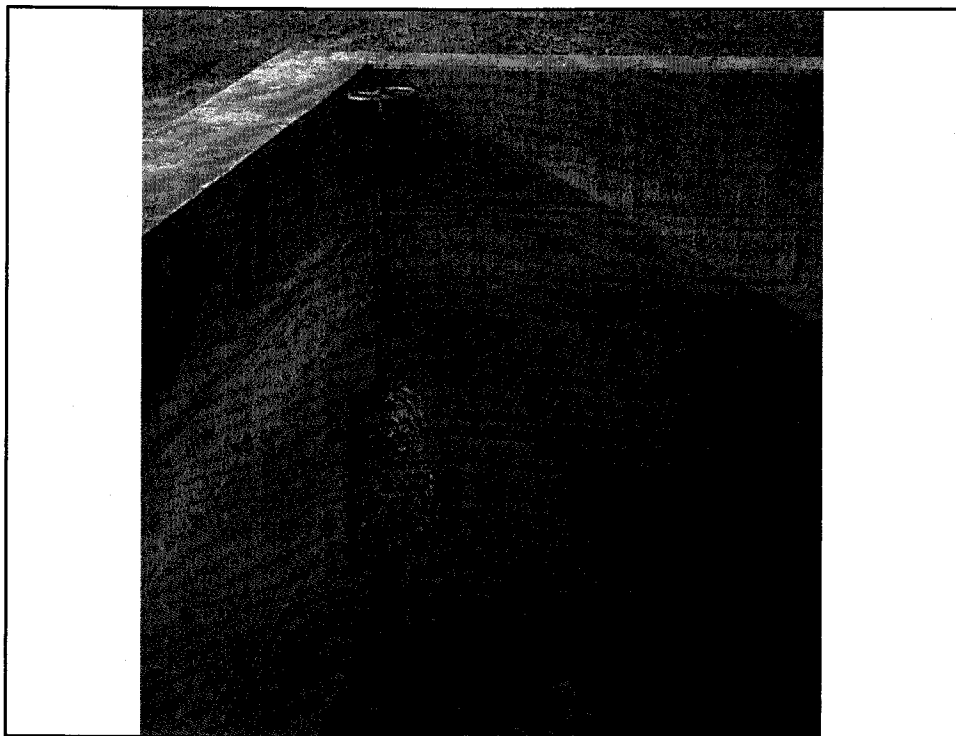
- WCSA has a General Engineering Agreement with Bennett Associates.

Issues:

- 12-inch interceptor carries waste water to Hall Creek.
- Waste stream passes thru a mechanical screen with 1-2 inch openings and material is collected in hopper. Flow also goes thru a grinder, but some materials passes thru like wipes, rags and other debris as seen in photos.
- Flow passes thru a mechanical screen which collects screenings for disposal
- Screens are not small enough to collect small particles and they also screen out some food material that is need for food for the microorganisms.
- Wipes, rags and other material can get by screen and the grinder creating pass by, or letting unwanted material by the screens.
- Updated screening system would assist in preventing pass by and also let needed food in for the microorganisms.







Solutions:

- Work with Bennett to identify deficiencies in the existing screening process.
- Working with Operator and Plant Manager to evaluate rehabing the existing screening system and reviewing safety features. *****WCSA's desire is to work with Bennett to find the best screening mechanism as practical.
- Once solution is established, Bennett will formulate a equipment procurement package that WCSA can take out to bid and perform contract administration.
- Bennett will also develop inspections standards and assist WCSA in the screening system upgrade
- Proposed task order is Hourly Not –to Exceed, \$28,254.36

Agenda Item 13 – Consideration of Awarding Construction Bids and Funding for Rich Valley Road Water Line Extension Project

- Project was bid with basically 3 contracts. A Contract 1, Contract 2 and a Combination Contract that combined Contracts 1&2.
- Bids were received on December 18th, 2018.
- All three contracts has the option as PVC for Option 1 and Ductile Iron as Option 2. Bidders were encouraged to submit bids for any contract or combination with the bids being evaluated on lowest bid and pipe selection (PVC vs. Ductile)
- Low bidder for ductile iron was:
 - Contract 1 – Little B Enterprises - \$2,040,213.85
 - Contract 2 - McFall Excavating - \$1,349,625.00

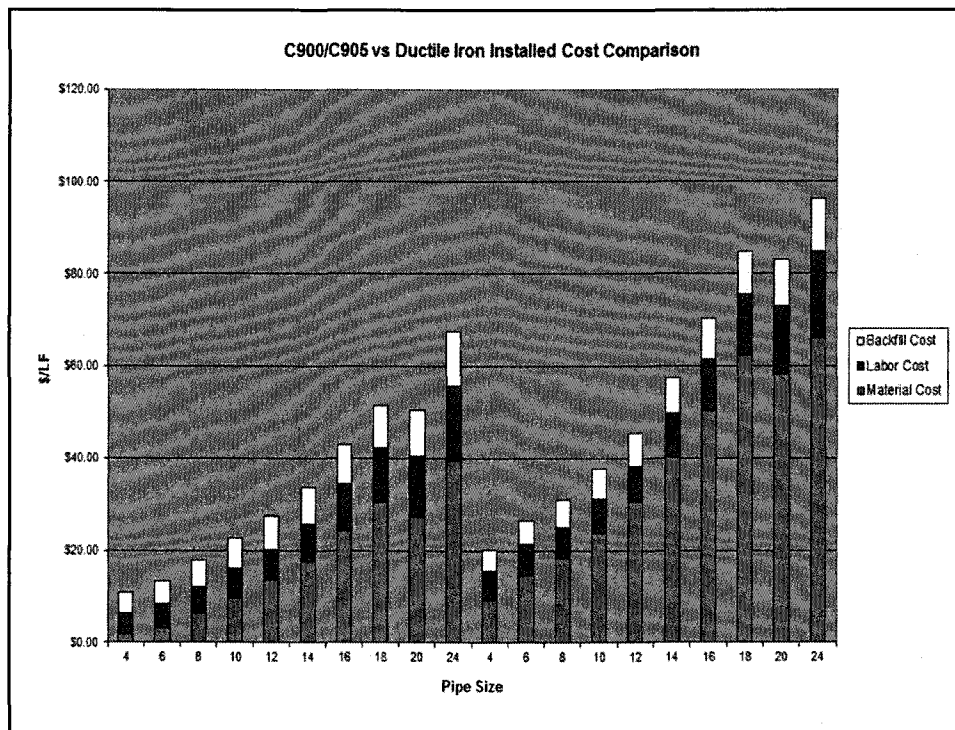
Total bids: \$3,389,838.85

WCSA has several reason preferring ductile iron to PVC pipe.

1. PVC requires tracer wire. Tracer wire is new to WCSA and question its long term longevity.
2. PVC requires stone bedding. Bedding mimicking a french drain, which makes it difficult to target leaks.
3. Ductile iron has been around longer and long term integrity is better known
4. Ductile iron is more resistant to mishandling.
5. Life-cycle costs of ductile is lower than PVC for operation and maintenance, less tap mishaps, easier to locate, WCSA sees lower leaks and breaks

Staff also felt it was important to review 3rd party information such as the "Ductile Iron Pipe Association". They suggested that ductile has 13 times more the impact strength. In evaluation from a PVC supplier, the PVC vs. Ductile cost comparison suggests that for 8" pipe PVC runs 17.86/ft, while ductile runs 30.80 /ft.

If you look at actual bids received for the project, for low bid, PVC is 38% higher and ductile iron is 8% higher than normal costs. This data suggests that bids received for ductile were better value than that of the PVC.



Funding Timeline

- April 1, 2017 the WCSA applied for project funding with the Virginia Department of Health (VDH) for the Rich Valley Road Water Line Extension Project. Involved replacing 7,700 L.F of old 4-inch cast long Rte. 19 and
- Department of Health authorized financial assistance of in the form of an \$1,663,900 loan; leaving a project budget shortfall of \$1,500,000
- WCSA evaluated funding and determined it would utilize reserve funds for the remaining \$1,500,000 portion of the needed funding for the project, bringing total project funding to \$3,163,900
- WCSA received bids on the project on December 18, 2018 with the lowest combination of bids for the project totaling \$3,389,838.85
- Adding a five percent (5%) contingency and enumerated project costs (\$11,831.78), bring total project cost to \$3,571,162.58, resulting in budget shortfall of \$407,262.58.
- WCSA has worked with VDH and agreed to complete the first phase of an Asset Management plan in return for VDH providing an additional \$180,000 in grant funds for the project, leaving a budget shortfall to \$227,262.58.

Recommendation would be to award/fund:

- Contract 1 in the amount of \$2,040,213.85 to Little B Enterprises.
- Contract 2 in the amount of \$1,349,625 to McFall Excavating.
- WCSA to utilize reserve funds to cover budget shortfall of \$227,262.58